

ST. JOSEPH'S COLLEGE (AUTONOMOUS), BANGALORE-27

B.SC. STATISTICS – I SEMESTER

MID-SEMESTER EXAMINATION – AUGUST 2018 20.8.2018

ST 118: INTRODUCTION TO PROBABILITY AND STATISTICS

Time: 1 Hour

Max: 30 marks

This question paper has three parts and 1 printed page

I Answer any FIVE of the following: 5 x 2 = 10

1. Define Statistics.
2. Explain Qualitative and Quantitative data
3. Write a note on Kurtosis
4. Define Central tendency and list out any four measures
5. Distinguish between positive skewness and negative skewness
6. Write a note on Stem and leaf diagram.
7. The mean of five numbers is 30. If one number is excluded, their mean becomes 28. What is the excluded number?

II Answer any TWO of the following: 2 x 5 = 10

8. Distinguish between (i) Primary and Secondary data (ii) Attribute and Variable
9. Derive the formula for median in case of a continuous frequency distribution
10. Define arithmetic mean. State and prove any two properties of arithmetic mean

III Answer any ONE of the following: 1 x 10 = 10

11. A) Explain graphical method of locating mode (5)
B) Give one real life situation in which
 - i) The mean is an appropriate measure of central tendency.
 - ii) The mean is not an appropriate measure of central tendency but the median is an appropriate measure of central tendency
 - iii) The mean is not an appropriate measure of central tendency but the Mode is an appropriate measure of central tendency (3)C) Name the different scales of measurement (2)
12. A) Define Dispersion. Distinguish between Absolute Measures of Dispersion and Relative measures Measures of Dispersion (5)
B) Prove that $AM \geq GM$ for two variables (5)